What is claimed is:

1. A process for decontaminating lubricating oil from an internal combustion engine for reuse in engine lubrication comprising the steps of continuously and sequentially:

(a) filtering a portion of said oil at a flow rate ranging from about 4 to about 10 gallons per hour and at a pressure ranging from about 20 to about 100 psi to remove therefrom particulates having particle sizes over about 5 microns;

(b) passing the resulting so filtered oil through a metering jet into a chamber that is maintained at about atmospheric pressure, thereby depressurizing said oil;

(c) generally uniformly depositing the oil in said chamber upon upper inside side wall portions of a platen whose said inside side wall portions are in said chamber and that are generally tapered and generally decline in average transverse width with increasing vertical distance from said upper inside side wall portions while concurrently heating said inside side wall portions to a temperature ranging from about 150 to about 210° F. whereby a thin film of said oil is formed on said inside side wall portions and flows downwardly over said inside side wall portions;

(d) collecting in said chamber volatiles separated from said oil and venting said volatiles from said chamber; and

(e) draining oil reaching a bottom portion of said platen and combining said so drained oil with said lubricating oil.

2. The process of claim 1 wherein said inside side wall portions of said platen are generally conically configured.

3. The process of claim 2 wherein said inside wall portions have defined therein a plurality of localized slope changes whereby said thin film of

downwardly flowing oil moving thereover experiences a locally variable flow rate and film thickness, thereby to enhance the separation of said volatiles from said oil.

4. The process of claim 3 wherein said localized slope changes are defined by a plurality of longitudinally spaced inturned ledge regions.

5. The process of claim 4 wherein said inturned ledge regions extend circumferentially and define when viewed in longitudinal section a stair-step type of configuration.

6. The process of claim 4 wherein said inturned ledge regions each extend continuously in a spiral type of configuration.

7. The process of claim 4 wherein said inturned ledge regions each extend continuously in an arcuate type of configuration.

8. The process of claim 3 wherein said inside side wall portions are provided with a plurality of localized offset regions that have geometrically configured perimeter portions.

9. The process of claim 8 wherein at least some of said offset regions comprise depressions in said inside side wall portions.

10. The process of claim 8 wherein at least some of said offset regions comprise elevations in said inside side wall portions.

11. The process of claim 8 wherein each of said offset regions has a perimeter defined by a plurality of straight edge portions.

12. The process of claim 8 wherein each of said offset regions has a perimeter defined by a plurality of curved edge portions.

13. The process of claim 1 wherein in said chamber, depressurized oil from said metering jet is deposited in a distributing well, passed therefrom into radially extending tube means, transported therefrom into a circular, horizontally oriented tube member that is located above said upper inside side wall portions of said platen, and drained therefrom onto said upper inside side wall portions through hole means defined in said circular tube member.

14. A lubricating oil reconditioning apparatus comprising in combination:

(a) a generally conically configured platen means having associated electrically actuated resistance heating means for heating portions of said platen means, said platen means having an upper wide mouth, a lower small bottom aperture, and an average transverse internal diameter which generally decreases with increasing distance away from said mouth;

(b) a housing structure that includes a cap plate subassembly and support means for said platen means and that generally encloses said platen means and said heating means, said housing structure defining in cooperation with said platen means a first chamber that is adjacent to, and over, said platen means;

(c) said cap plate subassembly includes metering jet means for receiving and passing oil into said first chamber and further includes oil flow guidance means for said so received and passed oil in said first chamber for conveying and substantially uniformly distributing said oil upon upper internal surface portions of said platen whereby a thin film of oil is formed upon internal surface portions of said platen that descends downwardly over said internal surface portions;

(d) said housing structure further having vent means defined therein whereby volatiles evolved from said oil in said first chamber are vented; and

(e) drain means associated with said bottom aperture for collecting oil from said platen and for returning said collected oil to said circulating engine oil.

15. The apparatus of claim 14 wherein said oil flow guidance means comprises:

a central distributing vessel for receiving oil so passed by said metering jet,

a generally horizontally oriented, generally circular distributing tube centrally and peripherally located over said platen in radially outwardly spaced relationship relative to said distributing vessel, said distributing tube having defined in gravitationally lower portions thereof a plurality of relatively small holes, and

conveying tube means interconnected between said distributing vessel and said distributing tube,

whereby oil so passed by said metering jet successively passes through said distributing vessel, said conveying tube means and said distributing tube and is substantially uniformly distributed upon upper internal surface portions of said platen.

16. The apparatus of claim 15 wherein said conveying tube means comprises a plurality of radially extending, circumferentially spaced tube members.

17. The apparatus of claim 14 wherein said platen has internal surface regions that define a plurality of slope changes whereby oil flowing gravitationally downwards over said internal surface regions experiences a variable flow rate and a variable film thickness.

18. The apparatus of claim 14 wherein said housing structure further defines in cooperation with said platen means a second chamber that is adjacent to, and under, said platen means.

19. The apparatus of claim 18 wherein said associated electrically actuated resistance heating means for heating portions of said platen means is located in said second chamber.

20. The apparatus of claim 18 wherein said platen is supported on an upper interior circumferentially extending ledge defined in said housing structure by an upper outturned flange on said platen.